

Amendments to the Drawings:

On page 2, the Office objected to the drawings under 37 CFR §1.84(p)(5) because reference sign(s) mentioned in the description are not consistent with those in FIG. 2. In particular, reference was made to the lambda probes.

In response, applicants have amended FIG. 2 to replace numeral 26 with 44 and numeral 28 with 46.

Attachment: Replacement Sheet

Remarks

Claims 1 to 12 are pending of which claims 1, 3, 4, 6, 8, 10, 11 and 12 are in independent form. Claims 1 to 4, 6 and 8 to 12 are amended.

On page 3, the Office rejected claims 4 to 7, 9 and 10 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In particular, the Office rejected the limitation "the number of possible runthroughs" in claim 4, lines 6 to 7, for lack of antecedent basis. In claim 9, line 3, the limitation "relatively slow" was considered indefinite because the specification lacked some standard for measuring the degree intended.

In response, applicants have amended in claim 4 the term "the number of possible runthroughs" to "a number of possible executions." Antecedent basis issues in the other rejected claims were also addressed. Applicants also clarified that the computation raster (CALC) is slow relative to other functions. Support for this amendment can be found, for example, on page 7, lines 1 to 6, of the specification.

Also on page 3, the Office rejected claims 1, 2, 11 and 12 under 35 U.S.C. §102(b) as being anticipated by United States Patent 4,757,463 to Ballou et al (hereinafter "Ballou").

Ballou discloses a computerized automotive vehicle diagnostic system in which a test cable is attached to individual components and consists of multiple conductor cables. The cable is ultimately attached to the component and to a computer in a

terminus. Test functions are provided by three programmable resources: (1) a program controlled multimeter, (2) a program controlled DC voltage source and ground sink; and (3) the microcontroller itself which receives and interprets commands from the computer and controls the various probe elements based upon the test commands received. The terminal receives information from the electronic control module (ECM) via a data connection and formats the information in a standardized way which is accepted by the computer.

Ballou seeks an essentially automatic fault location, so that not every component suspected of fault has to be checked until the component that is in fact faulty has been found. Accordingly, Ballou seeks an improved diagnosis of the status of different sensors, switches, relays and actuators, which are controlled by on-board computers (see column 2, lines 32 to 36, and lines 48 to 59 as well as column 4, lines 8 to 21).

In contrast to Ballou, claims 1, 11 and 12 of the present invention require:

"causing said diagnostic function (D) to transmit data (CB) that said diagnostic function (D) could have found a fault to a central function (CF) in a format uniform for all diagnostic functions (D); and,

causing said central function (CF) to process said data (CB)." (emphasis added)

Ballou does not seek to transmit data specifying that the diagnostic function could have found a fault to a central function. Ballou is concerned with the diagnosis itself rather than with the possibility of the execution of the diagnosis. Thus, the applicants' invention determines the operability of

diagnostic functions, while Ballou's invention addresses the diagnosis itself.

In addition, Ballou discloses the formatting of data which is transmitted by the electronic engine control in a standardized manner which is accepted by a computer. However, Ballou does not disclose that the data of different diagnostic functions is converted into a format that is uniform for all diagnostic functions as required by the present claims and emphasized above. That is, Ballou does not disclose that the information of different diagnostic functions after formatting has a uniform format. This is not surprising since, in Ballou, the formatting is designed to bring the data into a format that is acceptable for the computer. The uniform format for diagnostic functions according to applicants' invention has, in contrast, the effect that the different diagnostic functions can be connected to the central function (CF) without requiring complex changes of the central function (CF). Thus, the uniform format allows any diagnostic function to be connected to the CF without requiring any adaptation. Accordingly, applicant's invention does not seek to make the diagnostic data acceptable for a computer, but to allow one central function (CF) to analyze the operability of a wide array of diagnostic functions. This is, according to applicants' claims, achieved by transmitting the data to a central function (CF) in a format uniform for all diagnostic functions.

On page 4, the Office rejected claim 9 under 35 U.S.C. §103(a) as being unpatentable over Ballou in view of the general knowledge in the art.

The Office acknowledged that Ballou did not disclose a relatively slow computation raster. However, the view was expressed that it would have been a matter of routine optimization to one having ordinary skill in the art at the time the invention was made to provide the diagnostic system of Ballou with a relative slow computation raster.

The deficiencies of Ballou have been discussed above. Applicants submit that the general knowledge in the art does not cure those deficiencies.

In particular, applicants submit that Ballou, when combined with the general knowledge in the art, does not teach or suggest all the claim limitations as required for a prima facie case of obviousness (MPEP §2142). In addition, applicants submit that there is no suggestion or motivation, either in Ballou or in the knowledge generally available to one of ordinary skill in the art, to modify Ballou to arrive at the presently claimed invention. Finally, applicants submit that there is no reasonable expectation of success.

Applicants have shown above that claims 1, 11 and 12 are not anticipated by Ballou. These claims should therefore be in condition for allowance. Accordingly, claim 2, which is dependent on claim 1, should also be allowable. Applicants have also shown that claim 9 is not made obvious by Ballou in view of the general knowledge in the art. In addition, claim 9 was amended to address the indefiniteness rejection. Accordingly, this claim should also be allowable.

Also on page 4, the Office objected to claims 3 and 8 as being dependent upon a rejected base claim, but considered them

allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.


In response, applicants have appropriately rewritten claims 3 and 8. Accordingly, these claims should now be in condition for allowance.

Also on page 4, the Office noted that claims 4 to 7 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. §112, second paragraph, and to include all the limitation of the base claim and any intervening claims.

The claims have been rewritten to overcome the rejection(s) under 35 U.S.C. §112, second paragraph, as discussed above and claims 4, 6 and 10 have been rewritten to incorporate the limitations of claim 1. These claims should therefor be in condition for allowance. Claims 5 and 7, which are dependent on claims 4 and 6, should also be allowable.

Reconsideration of the application is respectfully requested.

Respectfully submitted,



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